Spray Water Quality

Project Bluewater Fact Sheet

Poor quality spray water can significantly **reduce** the effectiveness of **glyphosate** and **2,4-D amine** (and other pesticides).

Failed Spray Jobs ← **Poor Quality Spray Water** → **Increased Chemical Rates**

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Herbicide Resistance

Main Factors to consider for spray water are:

Hardness **pH** **Bicarbonates**

pH

Spray water that has a **pH >8** can cause chemical products to **breakdown, poor droplet contact** and **reduced performance** of some adjuvants. Acidifying adjuvants (e.g. LI 700) can be used to lower pH to a more acceptable level

Bicarbonates

Bicarbonate (HCO_3^-) is an important negatively charged anion in water, and contributes to hardness. Bicarbonate levels **above 150 ppm** can affect the efficacy of certain herbicides especially **2,4-D amine** and some Group A herbicides

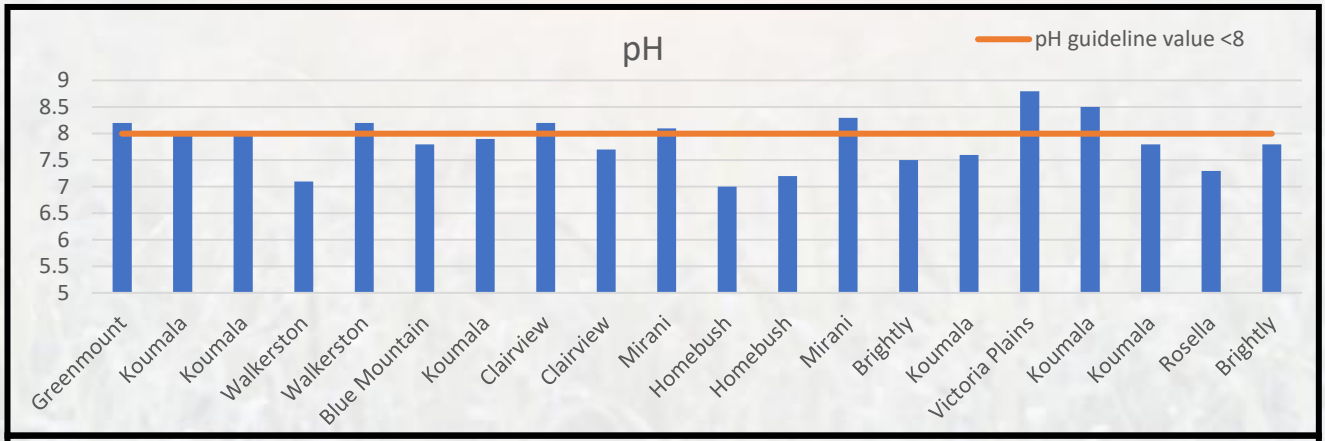
Hardness

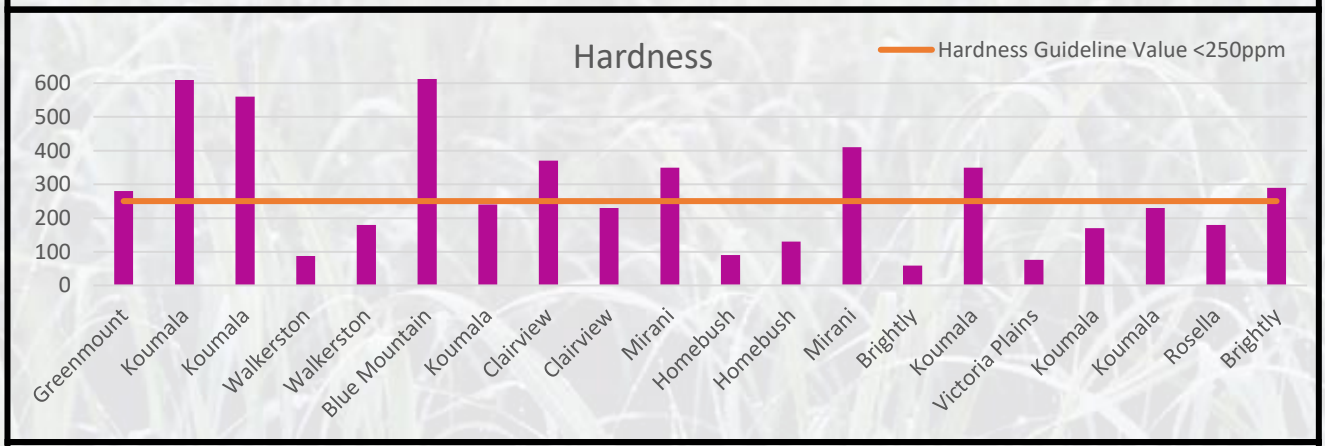
Hardness is measure of the amount of positive ions in the water. Positive ions with a strong charge (e.g. calcium and magnesium) can bind with negatively charged products such as weak acid herbicides (e.g. glyphosate), which can quickly cause them to lose their efficacy.

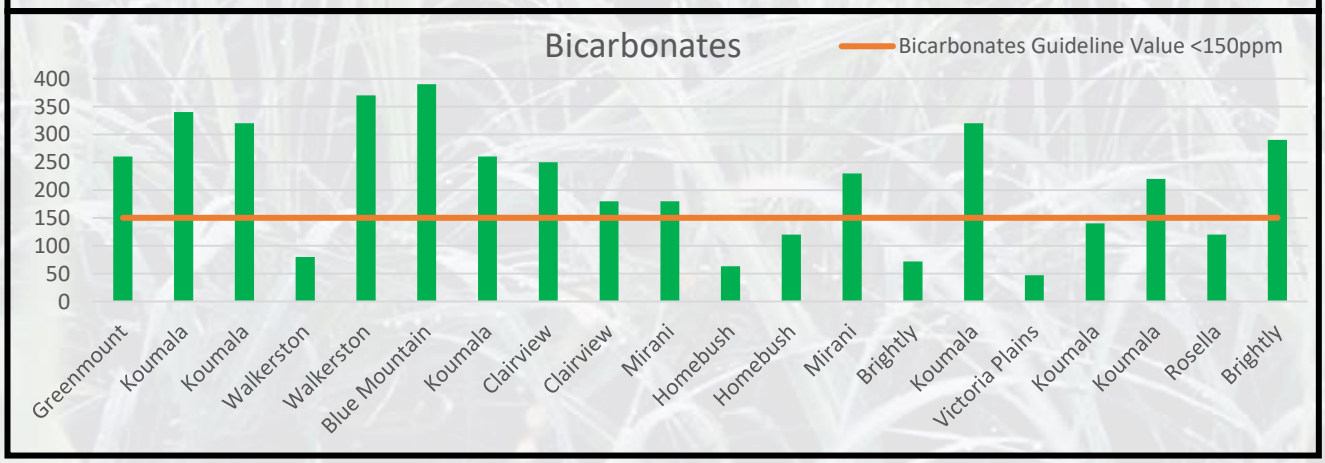
Water is classified as hard at 250-300ppm

Mackay Spray Water Results

Farmacist has conducted analysis of spray water across the Mackay region. The samples were mainly taken from **bores**.







There is a substantial variation in spray water quality across the district. Water testing and treatment is crucial to ensuring pesticide applications are effective.

HIGH pH water should always be treated with adjuvants such as **LI 700**

HARD water should always be treated with adjuvants such as **Ammonium Sulfate** or **Liase®**

HIGH BICARBONATE water should always be treated with adjuvants such as **Ammonium Sulfate** or **Liase®** or use an **alternate water source**

A **Project Bluewater** Initiative: Improved Pesticide Use

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